WHAT IS CLAIMED IS:

1. A track search control circuit comprises

an optical pickup for emitting and moving a light beam in the radial direction of an optical disc to write information signal into the optical disc or read the information signal therefrom;

a track traversing signal generation circuit for detecting, when the light beam emitted from the optical pickup moves in the radial direction of said optical disc, the light beam having traversed a track of the optical disc, and generating a normal direction on-track signal in an on-track period when said light beam traverses a zone of the track in a track search direction defined by a system controller and a normal direction off-track signal in an off-track period when said light beam traverses a zone between the tracks;

a first time measurement circuit which starts time measurement at a time when said on-track signal is generated by said track traversing signal generation circuit;

a second time measurement circuit which starts time measurement at a time when said off-track signal is generated by said track traversing signal generation circuit;

a velocity error signal generation circuit for detecting an error between a relative moving velocity of said light beam of said optical disc to said track

and a target velocity based on a measurement outputted by said first time measurement circuit and a measurement outputted by said second time measurement circuit to generate an error signal; and

a correction circuit for correcting the moving velocity of said light beam in the radial direction based on the error signal generated by said velocity error signal generation circuit.

2. A track search control circuit according to claim 1, wherein said on-track signal and said off-track signal are generated approximately at the time of zero-crossing of a tracking error signal indicating a relative positional displacement in the radial direction of the optical disc between the track and the light beam emitted from said optical pickup.

3. An optical disc drive comprises:

an optical pickup for emitting a light beam on a track of an optical disc, on which information is recorded, and receiving the reflected light from the track or the transmitted light therethrough while the optical disc is rotating, thereby extracting the information and converting the information to an electric signal;

a signal processing circuit for generating a tracking error signal that indicates a relative positional displacement in the radial direction of the optical disc between the track and the light beam

emitted from said optical pickup and a ripple signal that indicates amplitude information, from the electrical signal output of said optical pickup at a time when the light beam emitted from said optical pickup moves in the radial direction of said optical disc;

tracking servo mechanism for controlling the light beam emitted from said optical pickup in response to said tracking error signal so that the light beam in the radial direction of said disc is positioned on the track;

a track traversing signal generation circuit for detecting that the light beam emitted from said optical pickup has traversed said track based on said tracking error signal and said ripple signal, and generating a normal direction on-track signal in an on-track period when said light beam traverses a zone of the track and a normal direction off-track signal in an off-track period when said light beam traverses a zone between the tracks;

a first time measurement circuit that starts time measurement at a time when said on-track signal is generated by said track traversing signal generation circuit;

a second time measurement circuit that starts time measurement at a time when said off-track signal is generated by said track traversing signal generation

circuit;

a velocity error signal generation circuit for detecting an error between a moving velocity of said optical beam in the radial direction of said optical disc and a target velocity based on a measurement output of said first time measurement circuit and a measurement output of said second time measurement circuit to generate an error signal; and

a tracking velocity correction circuit for correcting the moving velocity of said optical beam in the radial direction by applying the error signal output of said velocity error signal generation circuit to said tracking servo mechanism.

4. An optical disc drive according to claim 3, wherein said tracking velocity correction circuit starts to apply a signal indicative of an acceleration energy corresponding to said error signal to said tracking servo mechanism in a half-track period after when said velocity error signal generation circuit starts the error detection and a signal indicative of a deceleration energy corresponding to said error signal to said tracking servo mechanism when a succeeding half-track comes in the target velocity period after when said velocity error signal generation circuit starts the error detection.

5. An optical disc drive according to claim 3, wherein said track traversing signal generation circuit

generates said on-track signal and said off-track signal approximately at the time of zero-crossing of said tracking error signal.

6. An optical disc drive according to claim 3, wherein

said first time measurement circuit comprise a first counter which is cleared by said on-track signal, counts clock signals having a constant frequency higher than that of said on-track signal, and goes into a hold status after generating a first flag output indicating that the moving velocity of said light beam after the generation of said on-track signal is lower than the target velocity;

said second time measurement circuit comprises a second counter which is cleared by said off-track signal, counts said clock signals, and goes into a hold status after having counted a specified number of clocks and subsequently generating a second flag output indicating that the moving velocity of said light beam after the generation of said off-track signal is lower than the target velocity; and

said velocity error signal generation circuit, based on said first flag output and said second flag output, generates an acceleration flag when the moving velocity of said light beam after the generation of said on-track signal and the moving velocity of said light beam after the generation of said off-track

signal are both lower than the target velocity, and generates a deceleration flag when the moving velocity of said light beam after the generation of said on-track signal and the moving velocity of said light beam after the generation of said off-track signal are both higher than the target velocity/.

7. An optical signal drive according to claim 6, wherein said tracking velocity correction circuit applies the signal indicative of the acceleration energy or deceleration energy of substantially a constant level to said tracking servo mechanism during both the acceleration flag and the deceleration flag are logically set up.

8. An optical disc drive according to claim 3, wherein said track traversing signal generation circuit, the first time measurement circuit, the second time measurement circuit, the velocity error signal generation circuit, and the tracking velocity correction circuit are formed on the same semiconductor chip in a form of an integrated circuit.

9. An optical disc drive according to claim 4, wherein said track traversing signal generation circuit, the first time measurement circuit, the second time measurement circuit, the velocity error signal generation circuit, and the tracking velocity correction circuit are formed on the same semiconductor chip in a form of an integrated circuit.

10. An optical disc drive according to claim 7, wherein said track traversing signal generation circuit, the first time measurement circuit, the second time measurement circuit, the velocity error signal generation circuit, and the tracking velocity correction circuit are formed on the same semiconductor chip in a form of an integrated circuit.

11. An optical disc drive according to claim 5, wherein said track traversing signal generation circuit, the first time measurement circuit, the second time measurement circuit, the velocity error signal generation circuit, and the tracking velocity correction circuit are formed on the same semiconductor chip in a form of an integrated circuit.

12. An optical disc drive according to claim 6, wherein said track traversing signal generation circuit, the first time measurement circuit, the second time measurement circuit, the velocity error signal generation circuit, and the tracking velocity correction circuit are formed on the same semiconductor chip in a form of an integrated circuit.